LABORATORY EQUIPMENT

ALBERENE STONE

The Standard Material for the Permanent Equipment of Laboratories in Industrial, Educational and Research Institutions

ALBERENE Stone is the standard material for laboratory table tops, shelving, sinks, splash backs, drainboards, fume hoods and related equipment. It is the only permanently satisfactory material used for these purposes.

The stone is furnished in two varieties, "Regular" and "Grade 25." Regular stone is the standard type of material known to chemists for sixty years or more.

Both are natural quarried silicate stones highly resistant to chemical attack. Both have a dense fine uniform grain structure without cleavage planes (stratification) which permits accurate machining for any desired purpose with absence of splitting, chipping or spalling.

It is thus possible to make the liquid, gas and germproof joints essential to first class construction (see details).

Regular grade has an abrasive hardness factor of 6—Grade 25 runs from 15 to 30. Regular grade has an absorbency factor of .15%—Grade 25—0.075%. These low-absorbency factors make the material essentially non-staining. Discolorations which may appear are purely surface and may be readily removed by scouring.

There is no surface glaze or coating; the surface goes right through to the back.

Regular grade is a pleasing neutral bluish-grey which is non-reflective—Grade 25 is darker and has greater decorative value.

For ordinary laboratory use we recommend Regular Grade. Where the service is unusually severe, we suggest Grade 25. Wherever stone is exposed to the action of salts which expand when drying out of solution—Grade 25 should be used.

The Bureau of Standards has shown that Grade 25 is entirely unaffected by photographic chemicals after a two-year test. Under the same test laminated stones have split or spalled away.

In the design and furnishing of a Laboratory all items must be scientifically planned and built to fit particular needs.

It is obvious that strong and rigid supports are a prime factor. We are prepared to furnish and erect all stone work as well as any type of supports.

We regularly furnish our stone to the leading equipment manufacturers. It is recommended that only those reliable manufacturers having had experience in this type of work be considered.

Through the years we have accumulated a fund of specialized knowledge of laboratory design and construction. Our engineers are regularly invited to advise with technicians, architects and engineers with respect to the planning and layout of laboratory rooms. We are always glad to furnish general layout drawings, sketches of details and to collaborate with the planner in creating a laboratory best adapted to the particular purpose intended. This service is offered freely and without obligation.

We are in a position to engineer and contract for complete installations and to dismantle, move, re-condition, and re-install existing equipment.

MATERIAL SPECIFICATION

"How to Specify"—Regular grade Alberene should be called for as follows: Wherever Laboratory Stone, Stone, Soapstone or Alberene Stone is noted on Drawings and/or schedules or mentioned in the specifications, the material used shall be a natural impure talc rock of massive formation, i.e., without lamination, stratification, or cleavage planes. In structure it shall be homogeneous, except for possible veining. The presence in the veins of scattered crystals of carbonate is to be expected and is acceptable. The stone shall be finely granular in all directions and under abrasive use it shall wear to a surface similar to a fine sandpaper and shall not scale or spall off nor show exposed elongated crystals.

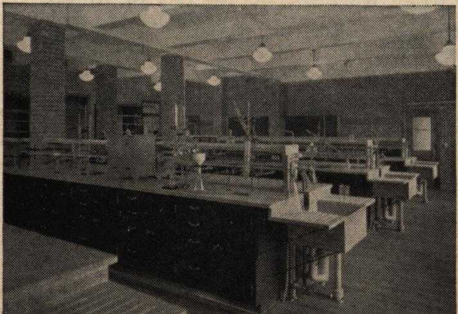
The stone shall have the following physical properties: Modulus of rupture in any direction—*Min.* 2,000 lbs. per square inch.

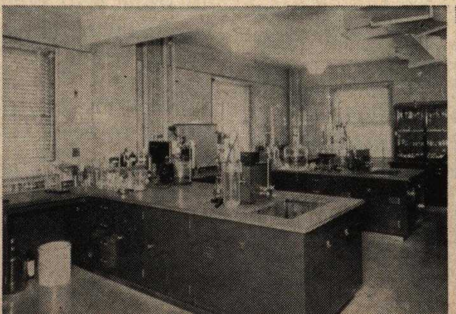
Abrasive hardness (Ha) Nat'l Bureau of Standards—*Min.* 4.50.

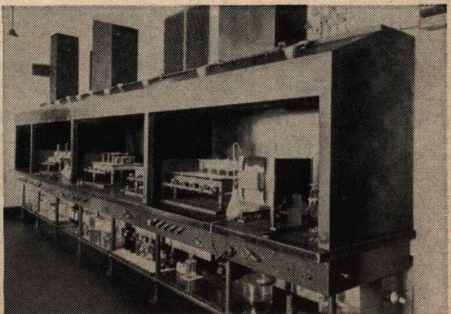
Absorption of water (48 hrs.) by weight—*Max.* 0.25%.

Grade 25—For this grade the same specification may be used with the following changes: (1) Substitute the word silicate for Talc. (2) Substitute a Hardness value of 15 for 4.50. (3) Substitute an absorption factor of 0.15 for 0.25.

In addition to the above the Public Building Service, Washington, D. C. includes in its specifications certain chemical resistance tests which must be met. Both grades of Alberene Stone easily meet this test.

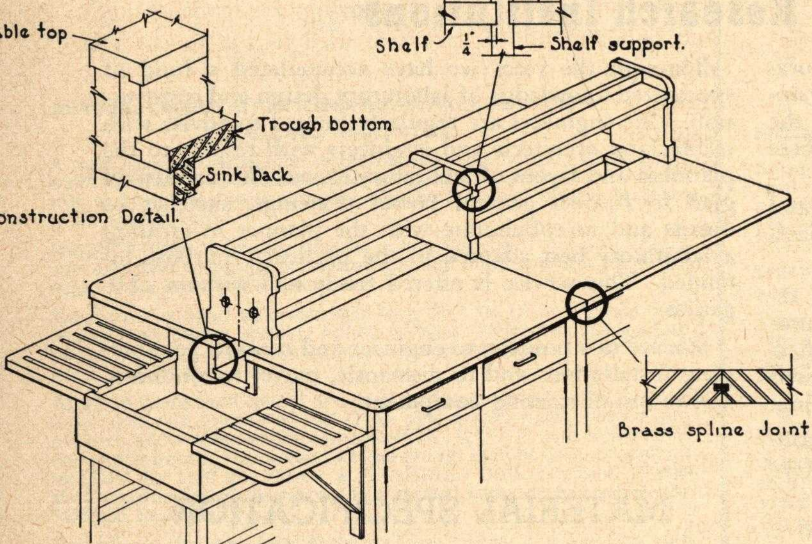


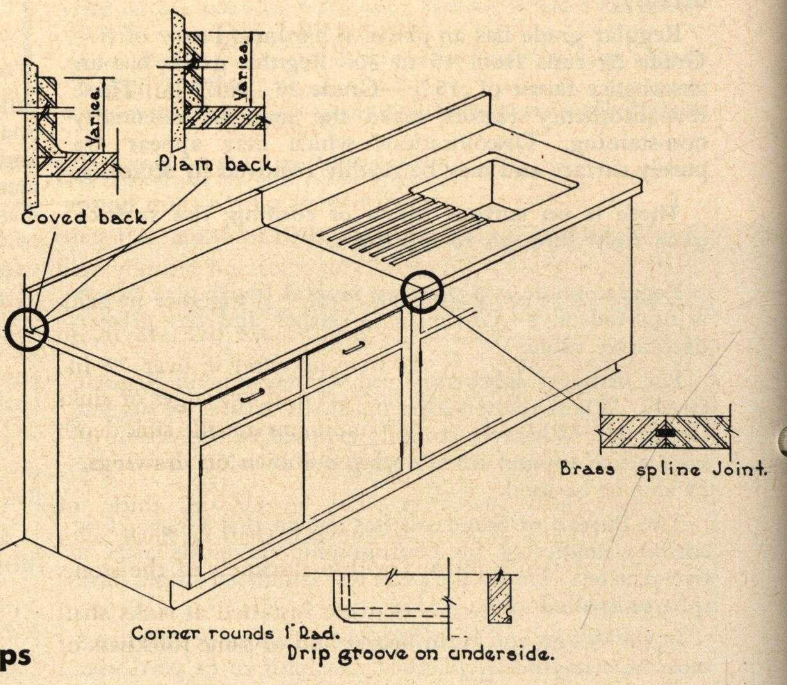




ALBERENE STONE — LABORATORY EQUIPMENT

LABORATORY CENTER AND WALL TABLES





Details of Construction

SPECIFICATIONS

for Alberene Stone Laboratory Table Tops

Alberene Stone table tops shall be of selected stone, 1¼ in. in thickness, unless otherwise called for, and provided with a 3/16 in. deep drip groove on the under side, ¾ in. back from the front edge. All tops or working counters for fume hoods, as also for table tops on which heat work is carried on, shall be of 2 in. thickness. Joints in table tops shall be made flush and tight by means of metal slip-tongue construction in acid-proof cement. Stone shelves shall be 1 in. thick, with stone shelf supports 1¼ in. thick. All exposed faces of tops, high backs and curbs shall be honed. Edges to be carborundum finish with arris of top only to be removed by stone-setter at time of installation.* While it is possible to furnish sections of stone of greater length, individual pieces should be held to a maximum length of 54 in., if possible, for best selection of stock.

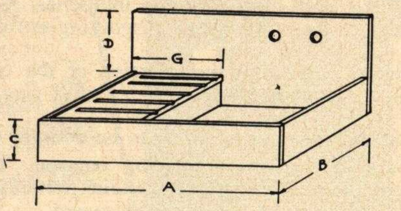
Where wall tables are installed across window openings there shall be provided a 3 in. high stone curb around openings above radiators. Provide high backs and high ends against building wall and partitions for all stone wall table tops; thickness to be 1¼ in. and a minimum height of 4 in. unless otherwise specified or shown.

All stone subject to the action of photographic chemicals is to be of Grade 25.

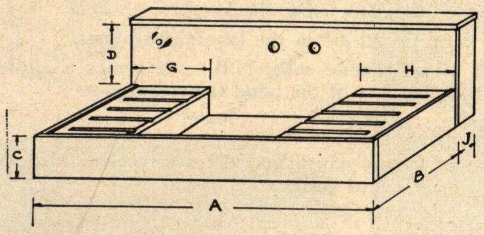
*Edges of Grade 25 stone to be honed at the Mill.

ALBERENE STONE

SINKS AND DRAINBOARDS



TYPE 4.



TYPE 5.

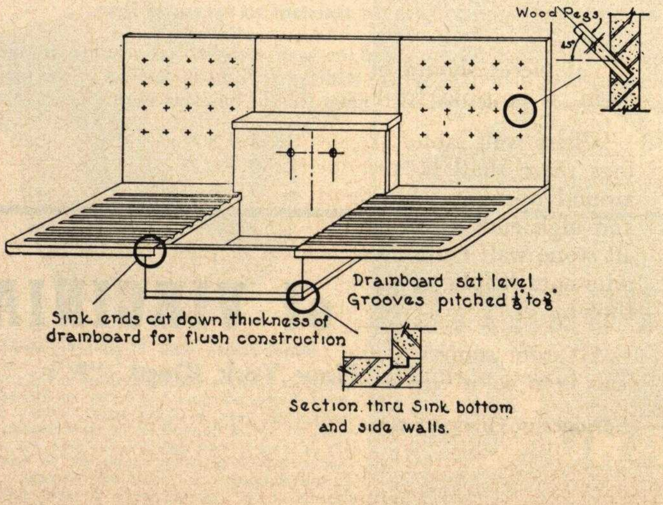
SPECIFICATIONS

for Alberene Stone Laboratory Sinks, Gutters, Drainboards and Pegboards

Alberene Stone sinks shall be constructed of selected stone. Sides to be 1¼ in. thickness with a flush bottom of 1¼ in. or 1½ in. thickness dished to drain. All slabs shall be tongued and grooved together and securely held by hidden bolts and nuts all cemented together by acid-proof cement. Sinks or tanks that are over 48 in. in length shall have 1½ in. bottoms, and if over 72 in., 2 in. bottoms. All inside surfaces and top edges of sinks shall be hone finished. The minimum outside sink depth shall be 10 in., unless otherwise shown on drawings.

Drainboards for sinks shall be 1¼ in. thick, of selected stone. Tops of drainboards shall be flush, with parallel grooving pitched within thickness of the stone.

Splash back and ends that are installed at sinks shall be not less than 8 in. in height and of same thickness of sink proper, unless otherwise shown on plans and to have exposed faces hone finished.


Wood Pegs
45°
Drainboard set level
Grooves pitched ⅛" to ⅜"
Sink ends cut down thickness of drainboard for flush construction
Section thru Sink bottom and side walls.

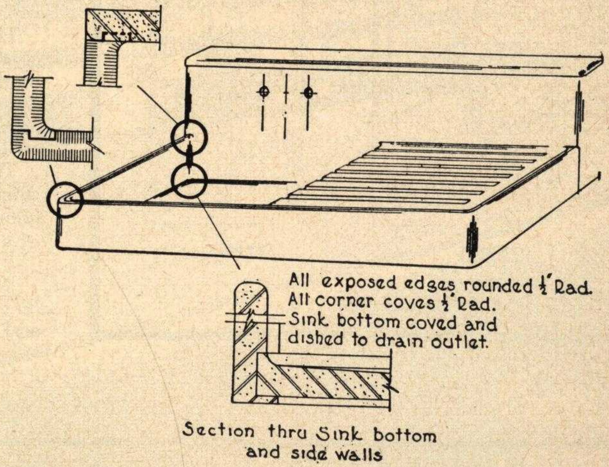
Where gutters are shown in tables they shall be constructed of 1¼ in. stone employing the rabbeted joint and bolt and nut construction used in the sinks. The dimension of a gutter shall be approximately 6 x 7 in. inside, gradually pitching from one end to a maximum depth of 6 in. at the outlet end. The amount of pitch shall be approximately 1 in. in 5 ft. The pitch in the gutters shall be accomplished by rabbeting the sides at an angle to accommodate the bottom, rather than pitching the entire gutter itself. We will not be responsible for leakage unless the gutter is adequately supported along its full length.

Where peg boards or racks are specified, these stone boards are to be used to hold peg supports on which glassware is suspended and dried. All exposed faces and edges of peg boards shall be hone finished. Unless otherwise shown on drawings, these stone peg boards shall be 36 in. in height and 1¼ in. thick, with holes bored at an angle of 45 degrees to the face of the stone for wooden pegs. Pegs can be furnished on request.

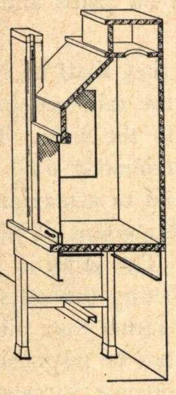
Sinks and drainboards used for photographic chemicals or for wash-up sinks shall be constructed of Grade 25 stone.

The details show only 2 type numbers. Additional types are illustrated in our complete Laboratory Bulletin, and also in a separate Sink Bulletin. Copies of both are available.

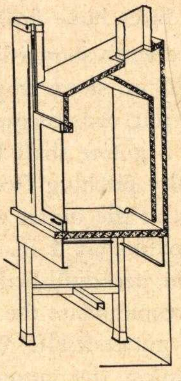
COVED CORNER CONSTRUCTION


All exposed edges rounded ½" Rad.
All corner coves ½" Rad.
Sink bottom coved and dished to drain outlet.
Section thru Sink bottom and side walls

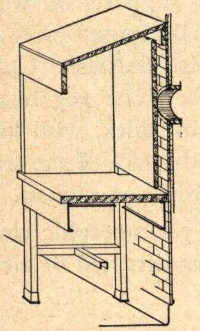
The drawing above shows our special construction, with all inside corners of the sink coved, and with bottom coved and dished to drain. The detail drawing shows exposed edges rounded. Any of our sinks can be furnished with complete coving and complete rounding of edges, as shown.



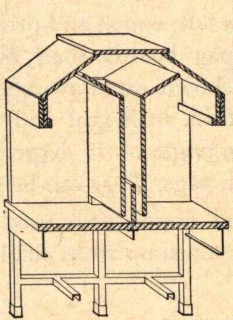
TYPE-1



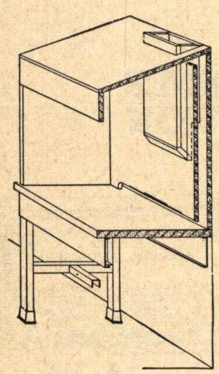
TYPE-4



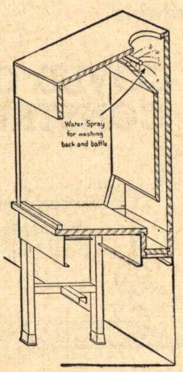
TYPE-2



TYPE-5



TYPE-3



TYPE-6

FUME HOODS

The Alberene Stone Corporation of Virginia maintains a staff of competent engineers who have had long and specialized experience in meeting the hood problems of many differing industries. We will be happy to have you make use of their experience in working out your hood problems.

Many factors enter into the selection of the type of fume hood used. Some of these factors are—

(1) Type and character of work to be done in the hood.
(2) Nature of the gases requiring removal. In the handling of perchloric acid, for example, certain precautions must be taken and specially designed hoods are necessary.
(3) Room space available and convenience of access.
(4) Number of students or chemists using the hood.
(5) Use or non-use of conditioned air in the laboratory rooms.
(6) Use or non-use of an adjustable sash, N.B.—sometimes a sliding sash effecting complete closure of the hood is necessary.
(7) Location of vent ducts.

In view of these and other factors which may enter in specific instances there can be no such thing as standard design.

PERCHLORIC HOODS

Our engineers pioneered the design of special-type hoods for handling perchloric acid. Alberene Stone is ideally suited to this type of work because it is practically non-absorbent. The Alberene construction is such that liquid-tight joints are easily made. Proper functioning of the special type hood for perchloric acid depends on adequate flushing and means to remove wash water.

If you have a problem that requires a special-purpose hood for its solution, our engineers welcome the chance to help you select or design the type of hood best-suited for the job.

The sections and photographs shown on these pages portray successfully operating hood installations. Any type may be furnished with or without sliding sash.

The first and principal advantage of an Alberene Hood lies in the value of the stone itself as a chemically resistant material. Secondly the nature of the stone, and the thicknesses used are such that the structure of the hood may be built with no exposed bolts, screws, nuts, etc., within the hood itself.

The stone superstructure is usually constructed of 1¼ in. thickness of stone. Baffles are generally made 1 in. thick. We recommend that the hood base or counter be constructed of 2 in. thick stone specially selected of a grade of stone found to be most resistant to excessive heat.

Where metal is used for sash and/or sash weights and chains, it must be of non-corrosive material. Where additional light is desired in the hood and glass windows are desired such glass should be clear wire glass.

ALBERENE STONE CORPORATION of VIRGINIA

General Sales Office—386 Park Avenue South, New York 16, New York (Dept. "F")

Quarries and Mills—Schuyler, Virginia

Digitized by:

INTERNATIONAL

ASSOCIATION
FOR
PRESERVATION
TECHNOLOGY,
INTERNATIONAL
www.apti.org

BUILDING
TECHNOLOGY
HERITAGE
LIBRARY

https://archive.org/details/buildingtechnologyheritagelibrary

From the collection of:

Carol J. Dyson, AIA